

Selection Guide for RCA THYRATRON, GLOW-DISCHARGE, IGNITRON, and VACUUM-GAUGE TUBES

GLOW-DISCHARGE TUBES

| Average DC Operating Volts | DC Operating Current Range Ma. | Average DC Starting Volts | RCA Type |
|----------------------------------|--------------------------------|---------------------------|---------------------|
| Voltage-Regulator Types | | | |
| 59 | 0.4 to 2 | 67 | 991 |
| 75 | 5 to 30 | 105 | □OC2 |
| 75 | 5 to 40 | 100 | OA3 |
| 78 | 5 to 40 | 100 | OA3A |
| 108 | 5 to 30 | 115 | □OB2 |
| 108 | 5 to 30 | 115 | □6074 ^a |
| 108 | 5 to 40 | 115 | OC3 |
| 110 | 5 to 40 | 115 | OC3A |
| 150 | 5 to 40 | 160 | OD3A |
| 151 | 5 to 30 | 156 | □OA2 |
| 151 | 5 to 30 | 156 | 6073 ^b |
| 153 | 5 to 40 | 160 | OD3 |
| Voltage-Reference Types | | | |
| 86.5 | 1.5 to 3.5 | 107 | □5651A ^c |
| 87 | 1.5 to 3.5 | 107 | □5651 |
| Relay Types | | | |
| Maximum Peak Inverse Anode Volts | Maximum Cathode Milliampères | | RCA Type |
| | Peak | Average | |
| 180 | 100 | 25 | 1C21 ^d |
| 200 | 100 | 25 | □5823 ^e |
| 225 | 100 | 25 | OA4G ^e |

^a "Premium" version of OB2 intended for applications critical to shock and vibration.

^b "Premium" version of OA2 intended for applications critical to shock and vibration.

^c Like the 5651 but has greater voltage stability.

^d For operation from a dc supply.

^e For operation from an ac supply.

□ Miniature

IGNITRONS

| MAXIMUM RATINGS | | | | | | RCA Type |
|--------------------------------------------------------------------------------|------|-------|-----------------|---------------|----------------------------------------------------|--------------------|
| For power-supply frequencies of 25 to 60 cps | | | | | | |
| Anode Current ^a | | Peak | Demand Power | RMS Supply | Peak Anode Inverse or Forward Volts | |
| Time Av for Intervals | | | | | | |
| Amp | Sec | Amp | KVA | Volts | | |
| Resistance-Welding Control Service^b | | | | | | |
| 4.86 | 27.8 | 846 | 150 | 250 | - | 5550 |
| 4.86 | 11.6 | 354 | 150 | 600 | - | |
| 12.1 | 22 | 1692 | 300 | 250 | - | |
| 12.1 | 9.2 | 708 | 300 | 600 | - | |
| 30.2 | 18 | 3400 | 600 | 250 | - | 5551A |
| 30.2 | 7.5 | 1410 | 600 | 600 | - | |
| 56 | 18 | 1130 | 200 | 250 | - | |
| 56 | 7.5 | 466 | 200 | 600 | - | |
| 75.6 | 14 | 6800 | 1200 | 250 | - | 5552A |
| 75.6 | 5.8 | 2830 | 1200 | 600 | - | |
| 140 | 14 | 2260 | 400 | 250 | - | |
| 140 | 5.8 | 945 | 400 | 600 | - | |
| 192 | 11 | 13600 | 2400 | 250 | - | 5553B |
| 192 | 4.6 | 5660 | 2400 | 600 | - | |
| 355 | 11 | 4530 | 800 | 250 | - | |
| 355 | 4.6 | 1890 | 800 | 600 | - | |
| Intermittent Rectifier Service and Frequency-Changer Welder Service | | | | | | |
| 4 | 10 | 480 | - | - | 1500 | 5551A |
| 5 | 10 | 600 | - | - | 1200 | |
| 40 | 6 | 700 | - | - | 500 | |
| 100 | 6 | 1600 | - | - | 500 | 5552A ^c |
| 32 | 6.25 | 2400 | - | - | 1500 | 5553B |
| 40 | 6.25 | 3000 | - | - | 1200 | |
| 54 | 6.25 | 4000 | - | - | 600 | |
| Resistance-Welding-Capacitor Discharge Service | | | | | | |
| 8 | 1.25 | 500 | 60 dischs/sec | d | | 5550 |
| 15 | 0.66 | 500 | 60 dischs/sec | 3000 | | |

^a Per tube. ^b Two tubes in inverse-parallel circuit.

^c Intermittent Rectifier Service only.

^d Forward volts = 6000, inverse volts = 3000.



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THYRATRONS

Triodes

| MAXIMUM RATINGS | | | | Filament-F or Heater-H | | RCA Type |
|-----------------------------|-------------|---------------------------------|-----------------------------------|------------------------------|-----|-------------|
| Anode Current | | Tempera- ture Range °C | Peak Inverse Anode Volts | | | |
| Av Amp | Peak Amp | | | Volts | Amp | |
| Mercury-Vapor Types | | | | | | |
| 0.5 | 2 | 40 to 80 | 5000 | 2.5 F | 5 | 5557 |
| 0.64 | 2.5 | 25 to 70 | 2500 | 2.5 F | 6 | 627 |
| 1.8 | 10 | 25 to 55 | 15000 | 5.0 F | 10 | 5563A |
| 2.5 | 15 | 40 to 80 | 1000 | 5.0 H | 4.5 | 5559 |
| 4 | 16 | 30 to 50 | 10000 | 5.0 H | 10 | 677 |
| 6.4 | 40 | 40 to 80 | 2500 | 5.0 H | 10 | 676 |
| Gas Types | | | | | | |
| 0.04 | 0.2 | -40 to +70 | 350 | 2.5 H | 2.6 | 629 |
| 0.045 | 35 | -50 to +90 | 3000 | 6.3 H | 2.3 | 6130/3C45 |
| 0.075 | 0.3 | -75 to +90 | 350 | 6.3 H | 0.6 | 884 |
| 0.075 | 0.3 | -75 to +90 | 350 | 2.5 H | 1.5 | 885 |
| 1 | 8 | -55 to +75 | 1250 | 2.5 F | 6.3 | C1K/6014 |
| 2.5 | 30 | -55 to +75 | 1250 | 2.5 F | 9 | C3J/5632 |
| 2.5 | 30 | -55 to +75 | 1250 | 2.5 F | 9 | C3JA/5684 |
| 2.5 | 30 | -55 to +75 | 1250 | 2.5 F | 9 | C3JL |
| 6.4 | 77 | -55 to +75 | 1250 | 2.5 F | 21 | C6J/5C21 |
| 6.4 | 77 | -55 to +75 | 1250 | 2.5 F | 21 | C6JA/5685 |
| 18 | 100 | -55 to +75 | 1250 | 2.5 F | 31 | C16J/5665 |
| Gas and Mercury-Vapor Types | | | | | | |
| 1 | 3 | -40 to +80 | 1250 | 2.5 F | 5 | 714/7021 |
| 1 | 8 | -40 to +80 | 1250 | 2.5 F | 6.3 | 716/6855 |
| 1.5 | 6 | -40 to +80 | 1250 | 2.5 F | 7 | 3C23 |
| 2.5 | 30 | -40 to +80 | 1500 | 2.5 F | 9 | 710/6011 |
| 6.4 | 77 | -40 to +80 | 1500 | 2.5 F | 21 | 760/6858 |

THYRATRONS

Tetrodes

| MAXIMUM RATINGS | | | | Filament-F or Heater-H | | RCA Type |
|---------------------|-------------|---------------------------------|-----------------------------------|------------------------------|------|--------------------------------------|
| Anode Current | | Tempera- ture Range °C | Peak Inverse Anode Volts | | | |
| Av Amp | Peak Amp | | | | | |
| Volts | | | | Amp | | |
| Mercury-Vapor Types | | | | | | |
| 2.5 | 15 | 40 to 80 | 1000 | 5 H | 4.5 | 5560 |
| 2.5 | 30 | 40 to 80 | 1500 | 5 H | 5 | 632B |
| 3.2 | 40 | 40 to 80 | 2500 | 5 H | 5 | 672A |
| 6.4 | 40 | 40 to 80 | 2000 | 5 H | 10 | 172 |
| 6.4 | 40 | 40 to 80 | 2500 | 5 H | 10 | 105 |
| Gas Types | | | | | | |
| 0.025 | 0.1 | -55 to +90 | 500 | 6.3 H | 0.15 | <input type="checkbox"/> 5696 |
| 0.1 | 0.5 | -75 to +90 | 1300 | 6.3 H | 0.6 | <input type="checkbox"/> 2021 |
| 0.1 | 0.5 | -75 to +150 | 1300 | 6.3 H | 0.6 | <input type="checkbox"/> 5727 |
| 0.1 | 1 | -55 to +90 | 1300 | 6.3 H | 0.6 | 502A |
| 0.1 | 1 | -75 to +90 | 1300 | 6.3 H | 0.6 | 2050 |
| 0.1 | 1 | -75 to +90 | 1300 | 6.3 H | 0.6 | 2050A |
| 0.5 | 5 | -75 to +90 | 1300 | 6.3 H | 2.6 | 6012 |
| 0.8 | 8 | -75 to +90 | 1500 | 6.3 H | 2.6 | 3D22A |

VACUUM-GAUGE TUBES

| Gas Pressure Range | | Gauge Type | RCA Type |
|----------------------------------------------|----------------------------------|----------------------------|-------------|
| in mm of Hg (Torr) | in microns | | |
| 1 to 0.0001 1 to 0.001* | 1000 to 0.1 1000 to 1* | Thermo- couple | 1946 |
| 1.5 to below 0.01 0.5 to 0.01* | 1500 to below 10 500 to 10* | Pirani | 1947 |
| 0.001 to below 0.0001 0.001 and below* | 1 to below 0.1 0.1 and below* | Ionization (Hard Glass) | 1949 |

* Range of greatest sensitivity.

☐ Miniature

